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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kelly P. Hodsdon

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02/25/2005

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EXAMINER

GOINS, DAVETTA WOODS

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/037,658	HODSON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Davetta W. Goins	2632	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-19 and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbour et al. (US Pat. 6,671,390 B1) in view of Lynch et al. (US Pat. 6,569,011 B1).

In reference to claims 1, 5, 10, 12, 15, Barbour discloses a) the claimed method of receiving input data of an event, which is met by one or more EM energy receiving devices 12A-12D receiving EM energy from the venue 14 at which the sport is being performed, the sports participants, at the venue, the sports articles (col. 5, lines 21-53), b) the claimed method of processing the input data to generate positional data, which is met by processing unit 18 utilizing the information convey via the EM energy to monitor, track and analyze the movements of the sports participants and articles (col. 6, lines 17-41), c) the claimed method of generating semantic information based on the positional data, which is met by upon tracking the participants and environmental conditions, the sport itself has features that are analyzed via information conveyed via the spatial phase of the EM energy and discerned via analysis such as location and time of the moving sports article or object, ball thrown, compilation of information leads to statistical analysis such as the number of plays; each play of the football game can include play set, ball handling participants, passing/running, fumble/recovery, etc. (col. 6, lines 17-64), and d)

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the claimed method of transmitting the semantic information to an officiating entity of the event, which is met by the EM system 10 providing an image of all or part of the sports venue, participants, and sports articles on a display 32 (col. 7, lines 14-25). Although Barbour does not disclose the claimed method of generating semantic information based on the positional data and game rules of the sporting event, the semantic information describing an officiating event, he does disclose a processing unit 18, which utilizes information about the movements of the sports participants and articles, determines and categories the sports participants or article movement types, speed, acceleration, impact force, or the like. Also the analysis of each play in the game can include play set, success factor (yards gained), type (passing/running), ball handling, fumble/recovery, number/type of plays (col. 6, lines 1-64). The invention is not limited to any "one" kind of sport; the possible sports range from basketball, handball, golf, hockey, horseback riding and cycling, water diving, snow skiing, using a vehicle race track, tennis, hockey (Figure 8, col. 13, lines 30-67; col. 14, lines 1-32). Barbour does not disclose the claimed wireless officiating device processed by an officiating entity, the wireless officiating device receiving semantic information to notify the officiating entity of the officiating event. However, Barbour discloses a display 32 used for providing images of the venue, participants/articles (col. 7, lines 14-25). Lynch discloses a system that allows for tracking players within a paintball game. Specifically, each player wears a device such that their positions can be tracked, via GPS method, and the player as well as the player scores can be determined and displayed to a referee of the game. The referee system 106 can be a portable LCD display including a speaker that wirelessly communicates, via wireless transceiver, with other systems to allow the referee to monitor the game (col. 3, lines 27-55; col. 4, lines 11-37; col. 6, lines 18-67; col. 7, lines 1-67;

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col. 8, lines 1-22; col. 9, lines 16-67; col. 10, lines 1-11). Since Barbour disclose that any type of sport can be monitored within the invention and a processing unit determines the position of the players and takes into consideration the venue (e.g. boundary lines or other locating marks) in order to determine and analyze each play such as a fumble/recovery in the game and Barbour discloses a display that will indicate the player's location as well as the analysis for the game and players, it would have been obvious to one of ordinary skill in the art at the time of the invention at the time of the invention to generate semantic information based on the positional data "and" game rules of the sporting event, such that the officiator is capable of receiving valid information pertaining to a specific sport that's being monitored as well as include a wireless signal that will be transmitted to an official of the game, as disclosed by Lynch, with the system of Barbour, to allow the official to be able to receive information about he players as well as the game while allowing the official to move around while observing the game.

In reference to claim 3, Barbour discloses the claimed sporting event a soccer game, which is met by monitoring soccer game (col. 12, lines 65-67; col. 13, lines 1-18 and Figure 8).

In reference to claim 4, although Barbour does not specifically disclose the claimed officiating entity is an event official, he does disclose a display 32 used for providing images of the venue, participants/articles (col. 7, lines 14-25). Since Barbour discloses a display 32 and since it is known that there are officials that monitor games, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide an event official as one to officiate the event to ensure that the correct calls, plays, etc. of the game can be properly determined.

In reference to claim 6, Barbour discloses the claimed method comprising querying the event model database for an officiating event, which is met by the processing unit 18 used for analyzing various parameters of the sport via EM receiving devices 12A-12D (col. 6, lines 9-40).

In reference to claims 7, 8, 13, 14, 16-18, Barbour discloses the claimed method of generating an animation based on the positional data, which is met by the display 32 providing an image of all or part of the sports venue, the image providing a three-dimensional representation of the sports participants/articles and the venue, a contrast representation, a surface orientation/curvature representation, material composition, or low light level image (col. 7, lines 14-25).

In reference to claim 11, Barbour discloses the claimed data unit comprising a tracking system, which is met by the use of tag 102, located on each player, such that the sports participant's movement can be tracked (col. 11, lines 16-44).

In reference to claims 9, 17, 27, although Barbour does not specifically disclose the claimed method of transmitting the semantic information to an officiating interface, he does disclose a system 10 including a processing unit 18 performing the mathematical process on the polarization metric values within the group for each pixel location to provide an image value to be displayed to create the image at the display 32 (col. 44-50). Since Barbour discloses a processing unit that receives positional information about the sporting event and configures the information for providing images of the game and participants to the display, it would have been

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obvious to one of ordinary skill in the art at the time of the invention to transmit the semantics to the display as well as show the animated images as a means for allowing the officiating entity to compare visual images with information about the different plays that have taken place.

In reference to claims 19, 22, 23, Barbour discloses a) the claimed method of receiving input data of an event, which is met by one or more EM energy receiving devices 12A-12D receiving EM energy from the venue 14 at which the sport is being performed, the sports participants, at the venue, the sports articles (col. 5, lines 21-53), b) the claimed method of processing the input data to generate positional data, which is met by processing unit 18 utilizing the information convey via the EM energy to monitor, track and analyze the movements of the sports participants and articles (col. 6, lines 17-41), c) the claimed method of generating semantic information based on the positional data, which is met by upon tracking the participants and environmental conditions, the sport itself has features that are analyzed via information conveyed via the spatial phase of the EM energy and discerned via analysis such as location and time of the moving sports article or object, ball thrown, compilation of information leads to statistical analysis such as the number of plays; each play of the football game can include play set, ball handling participants, passing/running, fumble/recovery, etc. (col. 6, lines 17-64), and d) the claimed method of transmitting the semantic information to an officiating entity of the event, which is met by the EM system 10 providing an image of all or part of the sports venue, participants, and sports articles on a display 32 (col. 7, lines 14-25). Although Barbour does not specifically disclose the claimed method of transmitting the semantic information to an officiating interface, he does disclose a system 10 including a processing unit 18 performing the mathematical process

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on the polarization metric values within the group for each pixel location to provide an image value to be displayed to create the image at the display 32 (col. 44-50). Although Barbour does not disclose the claimed method of generating semantic information based on the positional data and game rules of the sporting event, the semantic information describing an officiating event, he does disclose a processing unit 18, which utilizes information about the movements of the sports participants and articles, determines and categories the sports participants or article movement types, speed, acceleration, impact force, or the like. Also the analysis of each play in the game can include play set, success factor (yards gained), type (passing/running), ball handling, fumble/recovery, number/type of plays (col. 6, lines 1-64). The invention is not limited to any "one" kind of sport; the possible sports range from basketball, handball, golf, hockey, horseback riding and cycling, water diving, snow skiing, using a vehicle race track, tennis, hockey (Figure 8, col. 13, lines 30-67; col. 14, lines 1-32). Barbour does not disclose the claimed wireless officiating device processed by an officiating entity, the wireless officiating device receiving semantic information to notify the officiating entity of the officiating event. However, Barbour discloses a display 32 used for providing images of the venue, participants/articles (col. 7, lines 14-25). Lynch discloses a system that allows for tracking players within a paintball game. Specifically, each player wears a device such that their positions can be tracked, via GPS method, and the player as well as the player scores can be determined and displayed to a referee of the game. The referee system 106 can be a portable LCD display including a speaker that wirelessly communicates, via wireless transceiver, with other systems to allow the referee to monitor the game (col. 3, lines 27-55; col. 4, lines 11-37; col. 6, lines 18-67; col. 7, lines 1-67; col. 8, lines 1-22; col. 9, lines 16-67; col. 10, lines 1-11). Since Barbour disclose that any type of



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sport can be monitored within the invention and a processing unit determines the position of the players and takes into consideration the venue (e.g. boundary lines or other locating marks) in order to determine and analyze each play such as a fumble/recovery in the game, it would have been obvious to one of ordinary skill in the art at the time of the invention at the time of the invention to transmit the semantics to the display and show the animated images as well as generate semantic information based on the positional data “and” game rules of the sporting event, such that the officiator is capable of receiving valid information pertaining to a specific sport that’s being monitored and be able to compare visual images with information about the different plays that have taken place as well as include a wireless signal that will be transmitted to an official of the game, as disclosed by Lynch, with the system of Barbour, to allow the official to be able to receive information about the players as well as the game while allowing the official to move around while observing the game.

In reference to claim 21, Barbour discloses the claimed sporting event a soccer game, which is met by monitoring soccer game (col. 12, lines 65-67; col. 13, lines 1-18 and Figure 8).

In reference to claims 23, 24, 26, Barbour discloses the claimed method of generating an animation based on the positional data, which is met by the display 32 providing an image of all or part of the sports venue, the image providing a three-dimensional representation of the sports participants/articles and the venue, a contrast representation, a surface orientation/curvature representation, material composition, or low light level image (col. 7, lines 14-25).

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3. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure as follows. Suzuki (US Pat. 6,520,853 B2), Qian et al. (US Pat. 6,810,397 B1), and Verna (US Pat. 6,681,398 B1), which disclose game systems.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davetta W. Goins whose telephone number is 571-272-2957. The examiner can normally be reached on Mon-Fri with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Davetta W. Goins  
Primary Examiner  
Art Unit 2632



D.W.G.

February 22, 2005